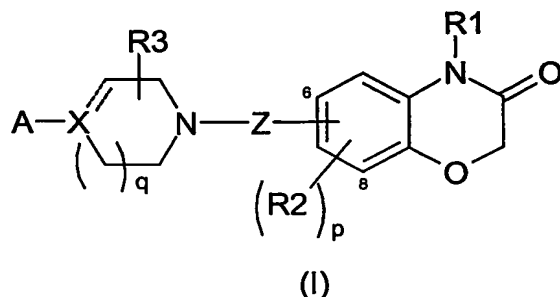


Claims

1. A compound of formula (I) or a pharmaceutically acceptable salt thereof:



5

wherein:

- A is a bicyclic 6,5 or 6,6 aromatic or heteroaromatic group which is optionally substituted by 1 - 4 substituents, which substituents may be the same or different, and which are selected from the group consisting of halogen, hydroxy, cyano, nitro, trifluoromethyl, trifluoromethoxy, C₁₋₆alkyl, trifluoromethanesulfonyloxy, pentafluoroethyl, C₁₋₆alkoxy, arylC₁₋₆alkoxy, C₁₋₆alkylthio, C₁₋₆alkoxyC₁₋₆alkyl, C₃₋₇cycloalkylC₁₋₆alkoxy, C₁₋₆alkanoyl, C₁₋₆alkoxycarbonyl, C₁₋₆alkylsulfonyl, arylsulfonyl, arylsulfonyloxy, C₁₋₆alkylsulfonamido, C₁₋₆alkylamido, arylsulfonamido, arylcarboxamido, aroyl, arylC₁₋₆alkanoyl, and a group Ar¹-B, wherein B represents a single bond, O, S or CH₂ and Ar¹ represents a phenyl or a monocyclic heteroaromatic group, said Ar¹ group being optionally substituted by 1 - 3 substituents, which may be the same or different, and which are selected from the group consisting of a halogen, hydroxy, cyano, trifluoromethyl, C₁₋₆alkyl, C₁₋₆alkoxy or C₁₋₆alkanoyl;
- R₁ is hydrogen, C₁₋₆alkyl, haloC₁₋₆alkyl, C₃₋₇cycloalkyl, C₃₋₇cycloalkylC₁₋₆alkyl, C₃₋₆alkenyl, C₃₋₆alkynyl or arylC₁₋₆alkyl;
- R₂ is independently halogen, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy;
- p is 0, 1 or 2;
- R₃ (a) is a group -(R₄)_r wherein R₄ is selected from the group consisting of: C₁₋₆alkyl, halogen, hydroxy, oxo, cyano, nitro, C₁₋₄alkoxy, haloC₁₋₄alkyl, haloC₁₋₄alkoxy, arylC₁₋₄alkoxy, C₁₋₄alkylthio, hydroxyC₁₋₄alkyl, C₁₋₄alkoxyC₁₋₄alkyl, C₃₋₆cycloalkyl, C₃₋₆cycloalkylC₁₋₄alkoxy, C₁₋₄alkanoyl, C₁₋₄alkoxycarbonyl, C₁₋₄alkylsulfonyl, C₁₋₄alkylsulfonyloxy, C₁₋₄alkylsulfonylC₁₋₄alkyl, arylsulfonyl, arylsulfonyloxy, arylsulfonylC₁₋₄alkyl, C₁₋₄alkylsulfonamido, C₁₋₄alkylamido, C₁₋₄alkylsulfonamidoC₁₋₄alkyl, C₁₋₄alkylamidoC₁₋₄alkyl, arylsulfonamido, arylcarboxamido, arylsulfonamidoC₁₋₄alkyl, arylcarboxamidoC₁₋₄alkyl, aroyl, aroylC₁₋₄alkyl, arylC₁₋₄alkanoyl, C₁₋₄acyl, aryl, arylC₁₋₄alkyl, C₁₋₄alkylaminoC₁₋₄alkyl and a group R₃₀R₃₁N- (where each of R₃₀ and R₃₁ independently represents a hydrogen atom or a C₁₋₄alkyl group or where appropriate R₃₀R₃₁

forms part of a C₃₋₆azacycloalkane or C₃₋₆(2-oxo)azacycloalkane ring), and r is 0, 1, 2 or 3; or

(b) forms a bridge across the ring, the bridge consisting of a chain of 1 to 3 atoms, the bridge being optionally substituted by one, two or three groups selected from halogen, oxo, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy; or

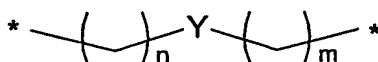
(c) is a chain of 1 to 3 atoms optionally substituted by halogen, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy, the other end of the chain being attached to an available carbon atom in Z;

X is CH, N or C;

----- represents a single bond when X is CH or N; and ===== represents a double bond when X is C;

q is 0, 1 or 2, wherein when q is 0, X is not N; and

Z is attached to the 6-position or the 8-position of the benzoxazinone group and is a 3 to 7 membered cycloalkylene group, 3 to 7 membered cycloalkenylene group, -(CH=CH)- or a group

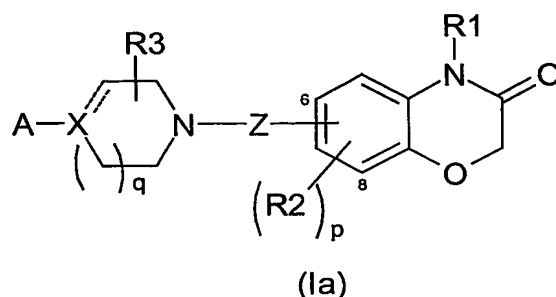


wherein m and n are independently 0, 1 or 2, and Y is a single bond, 3 to 7 membered cycloalkylene group, 3 to 7 membered cycloalkenylene group, -(CH=CH)-, -C(=O)-, -C(=CH₂)-, oxygen, or a methylene group optionally substituted by one or two groups selected from halogen, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy;

provided that when A is naphthyl, 5,6,7,8-tetrahydronaphthyl or 2,3-dihydroindene, Z is not -(CH₂CH(OH))-, -(CH₂CH₂CH(OH))- or -(CH₂C(=O)).

2. A compound as claimed in claim 1, wherein A is a bicyclic 6,5 or 6,6 heteroaromatic group.

3. A compound of formula (Ia) or a pharmaceutically acceptable salt thereof:



wherein:

A is a bicyclic 6,5 or 6,6 heteroaromatic group which is optionally substituted by 1 - 4 substituents, which substituents may be the same or different, and which are

- selected from the group consisting of halogen, hydroxy, cyano, nitro, trifluoromethyl, trifluoromethoxy, C₁₋₆alkyl, trifluoromethanesulfonyloxy, pentafluoroethyl, C₁₋₆alkoxy, arylC₁₋₆alkoxy, C₁₋₆alkylthio, C₁₋₆alkoxyC₁₋₆alkyl, C₃₋₇cycloalkylC₁₋₆alkoxy, C₁₋₆alkanoyl, C₁₋₆alkoxycarbonyl, C₁₋₆alkylsulfonyl, arylsulfonyl, arylsulfonyloxy, C₁₋₆alkylsulfonamido, C₁₋₆alkylamido, Arylsulfonamido, arylcarboxamido, aroyl, arylC₁₋₆alkanoyl, and a group Ar¹-B, wherein B represents a single bond, O, S or CH₂ and Ar¹ represents a phenyl or a monocyclic heteroaromatic group, said Ar¹ group being optionally substituted by 1 - 3 substituents, which may be the same or different, and which are selected from the group consisting of a halogen, hydroxy, cyano, trifluoromethyl, C₁₋₆alkyl, C₁₋₆alkoxy or C₁₋₆alkanoyl;
- R₁ is hydrogen, C₁₋₆alkyl, haloC₁₋₆alkyl, C₃₋₇cycloalkyl, C₃₋₇cycloalkylC₁₋₆alkyl, C₃₋₆alkenyl, C₃₋₆alkynyl or arylC₁₋₆alkyl;
- R₂ is independently halogen, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy;
- p is 0, 1 or 2;
- R₃ (a) is a group -(R₄)_r wherein R₄ is selected from the group consisting of: C₁₋₆alkyl, halogen, hydroxy, oxo, cyano, nitro, C₁₋₄alkoxy, haloC₁₋₄alkyl, haloC₁₋₄alkoxy, arylC₁₋₄alkoxy, C₁₋₄alkylthio, hydroxyC₁₋₄alkyl, C₁₋₄alkoxyC₁₋₄alkyl, C₃₋₆cycloalkyl, C₃₋₆cycloalkylC₁₋₄alkoxy, C₁₋₄alkanoyl, C₁₋₄alkoxycarbonyl, C₁₋₄alkylsulfonyl, C₁₋₄alkylsulfonyloxy, C₁₋₄alkylsulfonylC₁₋₄alkyl, arylsulfonyl, arylsulfonyloxy, arylsulfonylC₁₋₄alkyl, C₁₋₄alkylsulfonamido, C₁₋₄alkylamido, C₁₋₄alkylsulfonamidoC₁₋₄alkyl, C₁₋₄alkylamidoC₁₋₄alkyl, arylsulfonamido, arylcarboxamido, arylsulfonamidoC₁₋₄alkyl, arylcarboxamidoC₁₋₄alkyl, aroyl, aroylC₁₋₄alkyl, arylC₁₋₄alkanoyl, C₁₋₄acyl, aryl, arylC₁₋₄alkyl, C₁₋₄alkylaminoC₁₋₄alkyl and a group R₃₀R₃₁N- (where each of R₃₀ and R₃₁ independently represents a hydrogen atom or a C₁₋₄alkyl group or where appropriate R₃₀R₃₁ forms part of a C₃₋₆azacycloalkane or C₃₋₆(2-oxo)azacycloalkane ring), and r is 0, 1, 2 or 3; or
- (b) forms a bridge across the ring, the bridge consisting of a chain of 1 to 3 atoms, the bridge being optionally substituted by one, two or three groups selected from halogen, oxo, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy; or
- (c) is a chain of 1 to 3 atoms optionally substituted by halogen, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy, the other end of the chain being attached to an available carbon atom in Z;
- X is CH, N or C;
- represents a single bond when X is CH or N; and ===== represents a double bond when X is C;
- q is 0, 1 or 2, wherein when q is 0, X is not N; and
- Z is attached to the 6-position or the 8-position of the benzoxazinone group and is a 3 to 7 membered cycloalkylene group, 3 to 7 membered cycloalkenylene group, - (CH=CH)- or a group



wherein *m* and *n* are independently 0, 1 or 2, and *Y* is a single bond, 3 to 7 membered cycloalkylene group, 3 to 7 membered cycloalkenylene group, $-(CH=CH)-$, $-C(=O)-$, $-C(=CH_2)-$, oxygen, or a methylene group optionally substituted by one or two groups selected from halogen, C_1 -6alkyl, cyano, halo C_1 -6alkyl, C_1 -6alkanoyl, C_1 -6alkoxy or hydroxy;
 5 provided that when *A* is naphthyl, 5,6,7,8-tetrahydronaphthyl or 2,3-dihydroindene, *Z* is not $-(CH_2CH(OH))-$, $-(CH_2CH_2CH(OH))-$ or $-(CH_2C(=O))$.

4. A compound as claimed in any of claims 1 to 3, wherein *R*₁ is hydrogen or
 10 methyl.

5. A compound as claimed in any of claims 1 to 4, wherein *R*₃ is methyl.

6. A compound as claimed in any of claims 1 to 5, wherein *X* is CH or N and
 15 ----- is a single bond.

7. A compound as claimed in any of claims 1 to 6, wherein *q* is 1.

8. A compound as claimed in any of claims 1 to 7, wherein *Z* is $-(CH_2)_2-$ or $-(CH_2)_3-$.
 20

9. A compound as claimed in any of claims 1 to 8, wherein *A* is indolyl, quinolyl, quinazolinyl or 2,3-dihydrobenzodioxinyl.

10. A compound as claimed in any of claims 1 to 9, wherein *A* is substituted by 1 to 4 substituents selected from the group consisting of halogen (particularly fluoro or chloro), C_1 -6alkyl (particularly methyl, ethyl and propyl), cyano, CF_3 , C_1 -6alkoxy (particularly methoxy, ethoxy or isopropoxy) or C_1 -6alkanoyl.
 25

11. A compound as claimed in any of claims 1 to 10, wherein *A* is selected from the group consisting of 5-quinolyl(2-Me), 5-quinolyl(2-Me, 7-Cl), 5-quinolyl(2-Me, 7-F) and 5-quinazolinyl(2-Me), 5-quinolyl(2-Me, 7-Me), 5-dihydrobenzo[1,4]dioxinyl, 8-quinolyl(6-methoxy), 8-quinolyl, 4-indolyl and 4-indolyl(2-Me).
 30

12. A compound as claimed in claim 1, which is selected from the group consisting of:

6-{2-[4-(2-Methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one

6-{2-[4-(2,7-Dimethylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one

6-{2-[4-(7-Chloro-2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
 40 one

6-[2-(4-Quinolin-4-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one

6-{2-[4-(2-Methylquinazolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one

- 6-{2-[4-(2,3-Dihydrobenzo[1,4]dioxin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 6-{2-[4-(6-Methoxyquinolin-8-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 6-[2-(4-Quinolin-8-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 5 6-{2-[4-(1*H*-Indol-4-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 6-{2-[4-(7-Chloro-2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-7-fluoro-4*H*-benzo[1,4]oxazin-3-one
- 4-Methyl-6-{2-[4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 10 6-{2-[4-(2-Methylquinolin-5-yl)piperazin-1-yl]ethanoyl}-4*H*-benzo[1,4]oxazin-3-one
- 6-{1-Hydroxy-2-[4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 6-{2-[4-(2-Methyl-4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 15 6-{2-[3-Methyl-4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 6-{2-[2-Methyl-4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 6-{2-[4-(2-Methylquinolin-5-yl)-3,6-dihydro-2*H*-pyridin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 20 6-{2-[4-(2-Methylquinolin-5-yl)piperidin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 6-{2-[4-(2-Methylquinolin-5-yl)-[1,4]diazepan-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 6-{2-[4-(2-Methylquinazolin-5-yl)-[1,4]diazepan-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 7-Fluoro-6-{2-[4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
- 25 6-{3-[4-(2-Methylquinolin-5-yl)-piperazin-1-yl]-propyl}-4*H*-benzo[1,4]-oxa-zin-3-one
- 6-{3-[4-(7-Fluoro-2-methylquinolin-5-yl)piperazin-1-yl]-propyl}-4*H*-benzo-[1,4]oxazin-3-one
- 6-{3-[4-(2-Methylquinolin-5-yl)-piperazin-1-yl]-propanoyl}-4*H*-benzo[1,4]-oxa-zin-3-one
- 30 6-{1-Hydroxy-3-[4-(2-methylquinolin-5-yl)-piperazin-1-yl]-propyl}-4*H*-benzo-[1,4]oxazin-3-one
- 6-{(E)-3-[4-(2-Methylquinolin-5-yl)piperazin-1-yl]propenyl}-4*H*-benzo[1,4]-oxa-zin-3-one
- 6-{4-[4-(2-Methylquinolin-5-yl)piperazin-1-yl]butyl}-4*H*-benzo[1,4]oxazin-3-one
- 35 6-{4-[4-(2-Methylquinolin-5-yl)piperazin-1-yl]-cyclohex-1-enyl}-4*H*-benzo[1,4]-oxazin-3-one
- 6-{4-[4-(2-Methylquinazolin-5-yl)piperazin-1-yl]butyl}-4*H*-benzo[1,4]oxazin-3-one
- 6-{2-[4-(2-Methylquinolin-5-yl)piperazin-1-yl]ethoxy}-4*H*-benzo[1,4]oxazin-3-one
- 4-Methyl-6-{2-[4-(2-methylquinolin-5-yl)piperazin-1-yl]ethoxy}-4*H*-benzo[1,4]oxazin-3-one
- 40 7-Fluoro-6-{2-[4-(7-fluoro-2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one

- 6-{2-[4-(7-fluoro-2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]oxazin-3-one
7-Fluoro-6-{2-[4-(2-methylquinolin-5-yl)piperazin-1-yl]ethanoyl}-4*H*-benzo[1,4]oxazin-3-one
5 6-{1-Hydroxy-2-[4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]-oxazin-3-one
6-{1-Methoxy-3-[4-(2-methylquinolin-5-yl)piperazin-1-yl]propyl}-4*H*-benzo[1,4]-oxazin-3-one
6-{2-[4-(2-Methyl-1*H*-indol-4-yl)piperazin-1-yl]-ethyl}-4*H*-benzo-[1,4]oxazin-3-one
10 6-{2-[4-(5,6,7,8-Tetrahydronaphthalen-1-yl)piperazin-1-yl]ethyl}-4*H*-benzo-[1,4]oxazin-3-one
6-[2-(4-Naphthalen-1-yl)piperazin-1-yl]ethyl]-4*H*-benzo[1,4]oxazin-3-one hydrochloride salt
6-{1-Fluoro-2-[4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]-oxazin-3-one
15 6-{1-Fluoro-3-[4-(2-methylquinolin-5-yl)piperazin-1-yl]propyl}-4*H*-benzo[1,4]-oxazin-3-one
5-Fluoro-6-{2-[4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]-oxazin-3-one
20 5-Fluoro-4-methyl-6-{2-[4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]-oxazin-3-one
6-{2-[4-(7-Chloro-2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4-methyl-4*H*-benzo-[1,4]-oxazin-3-one
4-Ethyl-6-{2-[4-(2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4*H*-benzo[1,4]-oxazin-3-one
25 6-{2-[4-(7-Fluoro-2-methylquinolin-5-yl)piperazin-1-yl]ethyl}-4-methyl-4*H*-benzo-[1,4]-oxazin-3-one
6-{1-(Methyloxy)-2-[4-(2-methyl-5-quinoliny)]-1-piperaziny]ethyl}-2*H*-1,4-benzoxazin-3(4*H*)-one
30 6-{1-Amino-2-[4-(2-methyl-5-quinoliny)]-1-piperaziny]ethyl}-2*H*-1,4-benzoxazin-3(4*H*)-one
N-[2-[4-(2-Methyl-5-quinoliny)]-1-piperaziny]-1-(3-oxo-3,4-dihydro-2*H*-1,4-benzoxazin-6-yl)ethyl]acetamide
6-{1-(Methylamino)-2-[4-(2-methyl-5-quinoliny)]-1-piperaziny]ethyl}-2*H*-1,4-benzoxazin-3(4*H*)-one
35 6-[2-[4-(2-Methyl-5-quinoliny)]-1-piperaziny]-1-(phenyloxy)ethyl]-2*H*-1,4-benzoxazin-3(4*H*)-one
[2-[4-(2-Methyl-5-quinoliny)]-1-piperaziny]-1-(3-oxo-3,4-dihydro-2*H*-1,4-benzoxazin-6-yl)ethyl]formamide
40 6-{1-Hydroxy-1-methyl-3-[4-(2-methyl-5-quinoliny)]-1-piperaziny]propyl}-2*H*-1,4-benzoxazin-3(4*H*)-one
6-{1-Hydroxy-1-methyl-2-[4-(2-methyl-5-quinoliny)]-1-piperaziny]ethyl}-2*H*-1,4-benzoxazin-3(4*H*)-one

- 6-((1E)-1-Methyl-3-[4-(2-methyl-5-quinoliny)-1-piperazinyl]-1-propen-1-yl)-2H-1,4-benzoxazin-3(4H)-one
- 6-(1-{2-[4-(2-Methyl-5-quinoliny)-1-piperazinyl]ethyl}ethenyl)-2H-1,4-benzoxazin-3(4H)-one
- 5 6-(1-{[4-(2-Methyl-5-quinoliny)-1-piperazinyl]methyl}ethenyl)-2H-1,4-benzoxazin-3(4H)-one
- 2-[4-(2-Methyl-5-quinoliny)-1-piperazinyl]-1-(3-oxo-3,4-dihydro-2H-1,4-benzoxazin-6-yl)ethyl acetate
- 6-{1-Hydroxy-2-[4-(2-methyl-5-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 10 6-{[4-(8-Quinoliny)-1-piperazinyl]methyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[(1S,4S)-5-(2-Methyl-5-quinoliny)-2,5-diazabicyclo[2.2.1]hept-2-yl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(2-Quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 15 6-{3-[4-(2-Quinoliny)-1-piperazinyl]propyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(6-Chloro-2-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(6-Nitro-2-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(7-Methyl-1,8-naphthyridin-4-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 20 6-{2-[4-(1,6-Naphthyridin-5-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(2-Phenylquinolin-5-yl)piperazin-1-yl]ethyl}-4H-benzo[1,4]oxazin-3-one
- 6-{[4-(7-Fluoro-2-methyl-5-quinoliny)-1-piperazinyl]acetyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(7-Fluoro-2-methyl-5-quinoliny)-1-piperazinyl]-1-hydroxyethyl}-2H-1,4-benzoxazin-3(4H)-one
- 25 6-{1-Fluoro-2-[4-(7-fluoro-2-methyl-5-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 8-Fluoro-6-{2-[4-(2-methyl-5-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 30 8-Fluoro-6-{[4-(2-methyl-5-quinoliny)-1-piperazinyl]acetyl}-2H-1,4-benzoxazin-3(4H)-one
- 8-Fluoro-6-{1-hydroxy-2-[4-(2-methyl-5-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 8-Fluoro-6-{1-fluoro-2-[4-(2-methyl-5-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 35 8-Fluoro-6-{2-[4-(7-fluoro-2-methyl-5-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 8-Fluoro-6-{[4-(7-fluoro-2-methyl-5-quinoliny)-1-piperazinyl]acetyl}-2H-1,4-benzoxazin-3(4H)-one
- 40 8-Fluoro-6-{2-[4-(7-fluoro-2-methyl-5-quinoliny)-1-piperazinyl]-1-hydroxyethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{[4-(8-Chloro-2-methyl-5-quinoliny)-1-piperazinyl]acetyl}-2H-1,4-benzoxazin-3(4H)-one

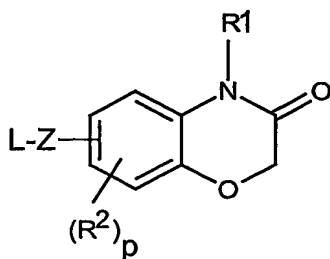
- 6-{2-[4-(8-Chloro-2-methyl-5-quinolinyl)-1-piperazinyl]-1-hydroxyethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(8-Chloro-2-methyl-5-quinolinyl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 5 4-Methyl-8-{2-[4-(2-methyl-5-quinolinyl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 8-{2-[4-(2-Methyl-5-quinolinyl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(7-Chloro-2-methyl-5-quinolinyl)-1-piperazinyl]ethyl}-7-fluoro-2H-1,4-benzoxazin-3(4H)-one
- 10 6-{2-[(2S)-2-Methyl-4-(2-methyl-5-quinolinyl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[(2R)-2-Methyl-4-(2-methyl-5-quinolinyl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(2,3-dihydro-1,4-benzodioxin-6-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 15 6-{2-[4-(3,4-dihydro-2H-1,5-benzodioxepin-7-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(7-bromo-1H-indol-4-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{3-[4-(7-bromo-1H-indol-4-yl)-1-piperazinyl]propyl}-2H-1,4-benzoxazin-3(4H)-one
- 20 6-{2-[4-(1-isoquinolinyl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- ethyl 5-{4-[2-(3-oxo-3,4-dihydro-2H-1,4-benzoxazin-6-yl)ethyl]-1-piperazinyl}-1-benzofuran-2-carboxylate
- 6-{2-[4-(1,2-dihydro-5-acenaphthylenyl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 25 6-{2-[4-(5-fluoro-1H-indol-3-yl)-1-piperidinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(5-chloro-1H-indol-4-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(6-chloro-1H-indol-4-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(1H-pyrrolo[2,3-b]pyridin-4-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 30 6-{2-[4-(7-chloro-1H-indol-4-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{3-[4-(1H-pyrrolo[2,3-b]pyridin-4-yl)-1-piperazinyl]propyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{3-[4-(5-chloro-1H-indol-4-yl)-1-piperazinyl]propyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(5-methylthieno[2,3-d]pyrimidin-4-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 35 6-({2-[4-(2-methyl-5-quinazoliny)-1-piperazinyl]ethyl}oxy)-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(7-Chloro-2-methylquinolin-5-yl)piperazin-1-yl]ethanoyl}-4H-benzo[1,4]oxazin-3-one
- 40 6-{2-[4-(7-Chloro-2-methyl-5-quinolinyl)-1-piperazinyl]-1-hydroxyethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(7-Chloro-2-methyl-5-quinolinyl)-1-piperazinyl]-1-fluoroethyl}-2H-1,4-benzoxazin-3(4H)-one

- 6-{3-[4-(2,2-Dimethyl-2,3-dihydro-1-benzofuran-7-yl)-1-piperazinyl]propyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(2,2-dimethyl-2,3-dihydro-1-benzofuran-7-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 5 4-Methyl-6-[[4-(1H-pyrrolo[2,3-b]pyridin-3-yl)-3,6-dihydro-1(2H)-pyridinyl]acetyl]-2H-1,4-benzoxazin-3(4H)-one
- 6-{1-hydroxy-2-[4-(1H-pyrrolo[2,3-b]pyridin-3-yl)-3,6-dihydro-1(2H)-pyridinyl]ethyl}-4-methyl-2H-1,4-benzoxazin-3(4H)-one
- 6-[[4-(2-Methyl-5-quinolinyl)-1-piperazinyl]methyl]-2H-1,4-benzoxazin-3(4H)-one
- 10 4-methyl-6-[[4-(2-methyl-5-quinolinyl)-1-piperazinyl]acetyl]-3,4-dihydro-2H-1,4-benzoxazin-2-one
- 4-Methyl-6-(1-[[4-(2-methyl-5-quinolinyl)-1-piperazinyl]methyl]ethenyl)-3,4-dihydro-2H-1,4-benzoxazin-2-one
- 6-(2-Hydroxy-1-[[4-(2-methyl-5-quinolinyl)-1-piperazinyl]methyl]ethyl)-4-methyl-3,4-dihydro-2H-1,4-benzoxazin-2-one
- 15 6-[[4-(6-fluoro-2-methyl-5-quinolinyl)-1-piperazinyl]acetyl]-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(6-Fluoro-2-methyl-5-quinolinyl)-1-piperazinyl]-1-hydroxyethyl}-2H-1,4-benzoxazin-3(4H)-one
- 20 6-{1-Hydroxy-2-[4-(2-methyl-5-quinolinyl)-1-piperazinyl]ethyl}-4-methyl-2H-1,4-benzoxazin-3(4H)-one
- 6-[[4-(8-Fluoro-2-methyl-5-quinolinyl)-1-piperazinyl]acetyl]-4-methyl-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(8-Fluoro-2-methyl-5-quinolinyl)-1-piperazinyl]-1-hydroxyethyl}-4-methyl-2H-1,4-benzoxazin-3(4H)-one
- 25 6-[[4-(6-Fluoro-2-methyl-5-quinolinyl)-1-piperazinyl]acetyl]-4-methyl-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(6-Fluoro-2-methyl-5-quinolinyl)-1-piperazinyl]-1-hydroxyethyl}-4-methyl-2H-1,4-benzoxazin-3(4H)-one
- 30 4-Methyl-6-{2-[4-(2-methyl-5-quinolinyl)hexahydro-1H-1,4-diazepin-1-yl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 4-Methyl-6-{2-[3-methyl-4-(2-methyl-5-quinolinyl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
- 6-{2-[4-(8-Chloro-2-methylquinolin-5-yl)-piperazine-1-yl]-ethyl}-4-methyl-4H-benzo[1,4]oxazine-3-one
- 35 6-{2-[4-(8-Fluoro-2-methyl-quinolin-5-yl)-piperazine-1-yl]-ethyl}-4-methyl-4H-benzo[1,4]oxazine-3-one
- 6-{2-[4-(2-Methyl-1H-indol-4-yl)piperazin-1-yl]ethanoyl}-4H-benzo[1,4]oxazin-3-one
- 6-{1-Hydroxy-2-[4-(2-methyl-1H-indol-4-yl)piperazinyl]ethyl}-2H-benzo[1,4]oxazin-3-one
- 40 6-{1-Fluoro-2-[4-(2-methyl-1H-indol-4-yl)piperazinyl]ethyl}-2H-benzo[1,4]oxazin-3-one

- 6-{2-[4-(7-Fluoro-2-methyl-5-quinoliny)-1-piperazinyl]-1-hydroxyethyl}-2H-1,4-benzoxazin-3-(4H)-one
 6-{2-[4-(2-Methyl-5quinoliny)-1-piperadiny]-ethanoyl}-2H-1,4-benzoxazin-3(4H)-one
 6-{1-Hydroxy-2-[4-(2-methyl-5quinoliny)-1-piperadiny]-ethyl}-2H-1,4-benzoxazin-
 5 3(4H)-one
 6-{2-[4-(7-Fluoro-2-methylquinolin-5-yl)piperidin-1-yl]ethyl}-4-H-benzo[1,4]-oxazin-3-one
 6-{2-[4-(6-Fluoro-2-methyl-5-quinoliny)-1-piperazinyl]-1-hydroxyethyl}-2H-1,4-benzoxazin-3(4H)-one
 10 6{2-[4(8-Fluoro-2-methyl-5-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3-(4H)-one
 6-{2-[4-2-Quinoxaliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3-(4H)-one
 4-Methyl-8-{2-[(2R)-2-methyl-4-(2-methyl-5-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
 15 4-Methyl-8-{2-[(2S)-2-methyl-4-(2-methyl-5-quinoliny)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
 6-{2-[4-(7-Chloro-2,3-dihydro-1,4-benzodioxin-5-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
 6-{2-[4-(7-Fluoro-2,3-dihydro-1,4-benzodioxin-5-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
 20 6-{2-[4-(7-Bromo-2,3-dihydro-1,4-benzodioxin-5-yl)-1-piperazinyl]ethyl}-2H-1,4-benzoxazin-3(4H)-one
 8-{4-[2-(3-Oxo-3,4-dihydro-2H-1,4-benzoxazin-6-yl)ethyl]-1-piperazinyl}-2,3-dihydro-1,4-benzodioxin-6-carbonitrile
 25 and pharmaceutically acceptable salts thereof.

13. A process for the preparation of a compound of formula (I) as defined in claim 1 or a pharmaceutically acceptable salt thereof, which process comprises:

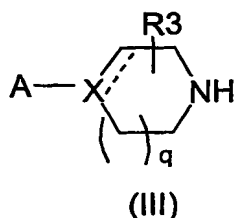
- 30 (a) reacting a compound of formula (II):



(II)

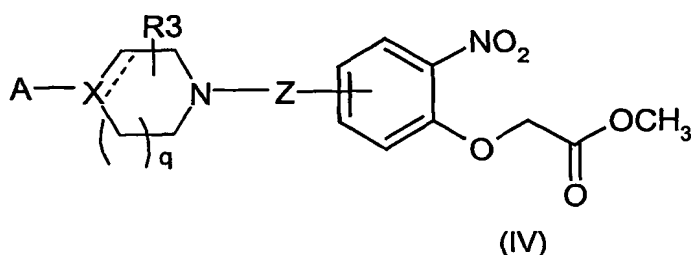
- wherein R¹, R², p and Z are as defined in formula (I), and L is a leaving group, with a
 35 compound of formula (III):

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wherein A, R₃, --- , X and q are as defined in formula (I); or

- 5 (b) the reduction and concomitant cyclisation of a compound of formula (IV):



- 10 in which A, X, R₃, --- , q and Z are as defined in formula (I);

and optionally thereafter for each of process (a) or (b):

- removing any protecting groups, and/or
- converting a compound of formula (I) into another compound of formula (I),
- 15 and/or
- forming a pharmaceutically acceptable salt.

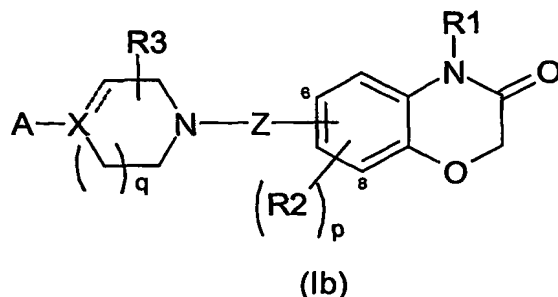
14. A compound of formula (I) or formula (Ia) as defined in any of claims 1 to 12 or a pharmaceutically acceptable salt thereof, for use in therapy.

20 15. A pharmaceutical composition, which comprises a compound of formula (I) or formula (Ia) as defined in any of claims 1 to 12 or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier or excipient.

25 16. A process for preparing a pharmaceutical composition as defined in claim 15, the process comprising mixing a compound of formula (I) or formula (Ia) as defined in any of claims 1 to 12 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier or excipient.

30 17. A compound of formula (Ib) or a pharmaceutically acceptable salt thereof:

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wherein:

- A is a bicyclic 6,5 or 6,6 aromatic or heteroaromatic group which is optionally substituted by 1 - 4 substituents, which substituents may be the same or different, and which are selected from the group consisting of halogen, hydroxy, cyano, nitro, trifluoromethyl, trifluoromethoxy, C₁₋₆alkyl, trifluoromethanesulfonyloxy, pentafluoroethyl, C₁₋₆alkoxy, arylC₁₋₆alkoxy, C₁₋₆alkylthio, C₁₋₆alkoxyC₁₋₆alkyl, C₃₋₇cycloalkylC₁₋₆alkoxy, C₁₋₆alkanoyl, C₁₋₆alkoxycarbonyl, C₁₋₆alkylsulfonyl, arylsulfonyl, arylsulfonyloxy, C₁₋₆alkylsulfonamido, C₁₋₆alkylamido, arylsulfonamido, arylcarboxamido, aroyl, arylC₁₋₆alkanoyl, and a group Ar¹-B, wherein B represents a single bond, O, S or CH₂ and Ar¹ represents a phenyl or a monocyclic heteroaromatic group, said Ar¹ group being optionally substituted by 1 - 3 substituents, which may be the same or different, and which are selected from the group consisting of a halogen, hydroxy, cyano, trifluoromethyl, C₁₋₆alkyl, C₁₋₆alkoxy or C₁₋₆alkanoyl;
- R₁ is hydrogen, C₁₋₆alkyl, haloC₁₋₆alkyl, C₃₋₇cycloalkyl, C₃₋₇cycloalkylC₁₋₆alkyl, C₃₋₆alkenyl, C₃₋₆alkynyl or arylC₁₋₆alkyl;
- R₂ is independently halogen, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy;
- p is 0, 1 or 2;
- R₃ (a) is a group -(R₄)_r wherein R₄ is selected from the group consisting of: C₁₋₆alkyl, halogen, hydroxy, oxo, cyano, nitro, C₁₋₄alkoxy, haloC₁₋₄alkyl, haloC₁₋₄alkoxy, arylC₁₋₄alkoxy, C₁₋₄alkylthio, hydroxyC₁₋₄alkyl, C₁₋₄alkoxyC₁₋₄alkyl, C₃₋₆cycloalkyl, C₃₋₆cycloalkylC₁₋₄alkoxy, C₁₋₄alkanoyl, C₁₋₄alkoxycarbonyl, C₁₋₄alkylsulfonyl, C₁₋₄alkylsulfonyloxy, C₁₋₄alkylsulfonylC₁₋₄alkyl, arylsulfonyl, arylsulfonyloxy, arylsulfonylC₁₋₄alkyl, C₁₋₄alkylsulfonamido, C₁₋₄alkylamido, C₁₋₄alkylsulfonamidoC₁₋₄alkyl, C₁₋₄alkylamidoC₁₋₄alkyl, arylsulfonamido, arylcarboxamido, arylsulfonamidoC₁₋₄alkyl, arylcarboxamidoC₁₋₄alkyl, aroyl, aroylC₁₋₄alkyl, arylC₁₋₄alkanoyl, C₁₋₄acyl, aryl, arylC₁₋₄alkyl, C₁₋₄alkylaminoC₁₋₄alkyl and a group R₃₀R₃₁N- (where each of R₃₀ and R₃₁ independently represents a hydrogen atom or a C₁₋₄alkyl group or where appropriate R₃₀R₃₁ forms part of a C₃₋₆azacycloalkane or C₃₋₆(2-oxo)azacycloalkane ring), and r is 0, 1, 2 or 3; or

(b) forms a bridge across the ring, the bridge consisting of a chain of 1 to 3 atoms, the bridge being optionally substituted by one, two or three groups selected

from halogen, oxo, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy; or

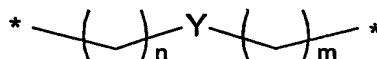
(c) is a chain of 1 to 3 atoms optionally substituted by halogen, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy, the other end of the chain being attached to an available carbon atom in Z;

X is CH, N or C;

----- represents a single bond when X is CH or N; and ===== represents a double bond when X is C;

q is 0, 1 or 2, wherein when q is 0, X is not N; and

Z is attached to the 6-position or the 8-position of the benzoxazinone group and is a 3 to 7 membered cycloalkylene group, 3 to 7 membered cycloalkenylene group, -(CH=CH)- or a group



wherein m and n are independently 0, 1 or 2, and Y is a single bond, 3 to 7 membered cycloalkylene group, 3 to 7 membered cycloalkenylene group, -(CH=CH)-, -C(=O)-, -C(=CH₂)-, oxygen, or a methylene group optionally substituted by one or two groups selected from halogen, C₁₋₆alkyl, cyano, haloC₁₋₆alkyl, C₁₋₆alkanoyl, C₁₋₆alkoxy or hydroxy;

for use in the treatment of a serotonin-related disorder.

18. A compound as claimed in claim 17, wherein the disorder is depression or anxiety.

19. Use of a compound as defined in claim 17 in the preparation of a medicament for the treatment of a serotonin-related disorder.

20. The use as claimed in claim 19, wherein the disorder is depression or anxiety.

21. A method of treatment of a serotonin-related disorder, comprising administering to a mammal in need thereof a safe and effective amount of a compound as defined in claim 17.

22. The method as claimed in claim 21, wherein the disorder is depression or anxiety.